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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,801	09/29/2000	Jeffrey L. Rabe	042390.P9428	8877

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EXAMINER
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PHAN, RAYMOND NGAN

ART UNIT	PAPER NUMBER
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2111

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/675,801

**Applicant(s)**

RABE ET AL.

**Examiner**

Raymond Phan

**Art Unit**

2111

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 31-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-18 is/are allowed.
- 6) ☒ Claim(s) 31-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **Part III DETAILED ACTION**

#### ***Notice to Applicant(s)***

1. This action is responsive to the following communications: the RCE filed on December 27, 2004.
2. This application has been examined. Claims 1-18 and 31-60 are pending.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 31-60 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bashford (US No. 6,629,179) in view of Pawlowski (US No. 5,956,516).

In regard to claims 31, 34, 37, 44, 51, 59, Bashford discloses the method comprising receiving, at an I/O controller, an interrupt request from an I/O device (see col. 5, line 30 through col. 6, line 22); generating, at the I/O controller, a memory request at the predetermined address in the response the interrupt request (see col. 1, lines 60 through col. 2, line 10); transmitting the memory request to the memory, the memory request being processed at the memory controller as one or more memory cycles (see col. 5, line 30 through col. 6, line 22). But Bashford does not specifically disclose memory request is being routed to a coupling with one ore more processors as a part of one or more interrupt message transactions on the bus. However Pawlowski discloses memory request is being routed to a coupling with one ore more processors as a part of one or more interrupt message transactions on the bus (see col. 4, lines 16-60). Therefore, it would have been obvious to a person of an ordinary skill in the art at the time the invention was

made to have combined the teachings of Pawlowski within the system of Bashford because it would it would reduce the wait times for service of interrupts.

In regard to claims 32, 52, Bashford discloses wherein the memory request is a memory write request to the memory controller (see col. 5, line 30 through col. 6, line 22).

In regard to claims 33, 38, 44, 53, Bashford discloses wherein the interrupt request is one of the interrupt request hardware signal and a memory write request to the I/O controller (see col. 5, line 30 through col. 6, line 22).

In regard to claims 39, 46, 54, Bashford discloses wherein the memory request is received one or more I/O device coupled to the memory controller (see col. 5, line 30 through col. 6, line 22).

In regard to claims 40, 47, 55, Pawlowski et al. disclose wherein the interrupt is marked as lowest priority re-directable and redirected to the lowest priority register (see col. 4, line 16 through col. 5, line 40).

In regard to claims 41, 48, 56, Pawlowski et al. disclose redirecting at least one interrupt based on the task priority information (see col. 5, line 6 through col. 6, line 20).

In regard to claims 42, 49-50, 57-58, Pawlowski et al. disclose further comprising providing support for the updated TPR transactions to update at least one updated TPR register (see col. 5, line 6 through col. 6, line 20).

In regard to claim 43, Pawlowski et al. disclose wherein the processor has the lowest priority among one or more processors (see col. 5, line 6 through col. 6, line 20).

In regard to claim 60, Pawlowski et al. disclose redirecting at least one interrupt based on the task priority information (see col. 4, lines 45-64) and

providing support for the updated TPR transactions to update at least one updated TPR register (see col. 7, line 51 through col. 8, line 14).

***Allowable Subject Matter***

5. Claims 1-18 are allowable over the prior art of records.
6. The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 1, 4, 7, 10 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts which teach the IO controller hub converting the interrupt into an upstream memory write interrupt by generating a memory write request to a predetermined address of memory space and the memory controller hub converting the upstream memory write into a front side bus (FSB) interrupt transaction.

***Response to Arguments***

7. In view of amendment and remarks filed on December 27, 2004, claims 31-60 have been fully considered but they are not deemed to be persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., south bridge and north bridge) are not recited in the rejected claims 31, 34, 37, 44, 51, 59. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. *In re Van Glens*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to applicant's argument that the combination of Bashford et al. and Pawlowski et al., the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot

be the basis for patentability when the differences would otherwise be obvious. *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

### Conclusion

8. Claims 31-60 are rejected. Claims 1-18 are allowed

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Raymond Phan, whose telephone number is (571) 272-3630. The examiner can normally be reached on Monday-Friday from 6:30AM- 4:00PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's Primary, Paul Myers can be reached on (571) 272-3639 or via e-mail addressed to paul.myers@uspto.gov. The fax phone number for this Group is (703) 872-9306.


Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [raymond.phan@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 central telephone number is (571) 272-2100.

  
**Raymond Phan**  
3/30/05

  
**PAUL R. MYERS**  
**PRIMARY EXAMINER**

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Art Unit: 2111

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